

Product datasheet

Total Protein Thiol Assay Kit (Colorimetric) ab219272

1 Image

Overview

Product name	Total Protein Thiol Assay Kit (Colorimetric)
Detection method	Colorimetric
Sample type	Purified protein
Assay type	Quantitative
Product overview	Total Protein Thiol Assay Kit (Colorimetric) (ab219272) provides an accurate method to quantify free thiol groups in proteins. The assay uses our proprietary thiol sensor, Thiol Blue, which has the maximum absorbance at OD 680 nm. Thiol Blue reacts with the protein samples that contain free thiol groups. The resulted thiol adduct is run through a single spin column to remove the excess Thiol Blue sensor, and the absorption spectrum of the purified product is measured. The amount of thiol to protein ratio is calculated from the absorbance ratio of 680 nm and 280 nm.

The assay can be performed in a traditional cuvette, Spectrophotometer or a convenient 96-well absorbance plate reader with a UV-transparent plate

Notes	It has been widely accepted that protein thiols are very important to protein structure, protein function and biological system redox environment. For example, albumin is the most abundant protein in plasma and the free thiol present in the albumin protein are considered as major plasma antioxidants in the body. The change of thiol status in albumin is related to a lot of diseases and disorders, such as kidney disease and Parkinson’s disease. Although there are a few reagents or assay kits available for quantitating the total thiol content in biological systems, a key challenge is to have a rapid and accurate method to quantify the amount of free thiol group in a specific protein.
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Platform	Microplate reader
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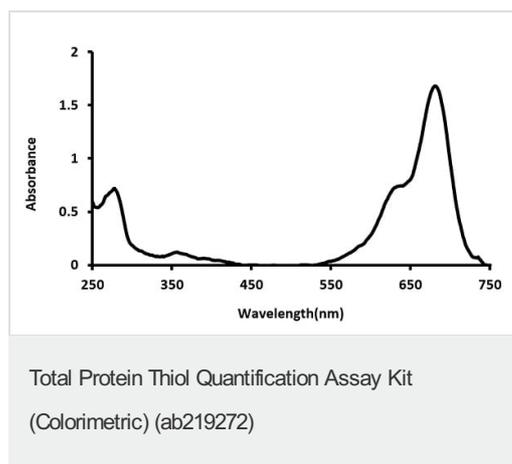
Properties

Storage instructions	Store at +4°C. Please refer to protocols.
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Components	2 tests
1.5 mL Collecting Tube	2 units
2 mL Washing Tube	2 units

Components	2 tests
Assay Buffer	1 x 15ml
Spin Column	2 units
Thiol Blue	2 vials

Images



Absorbance (OD) readings obtained using BSA as protein sample.

BSA absorbance at $A_{280\text{nm}} = 0.699$, $A_{680\text{nm}} = 1.678$.

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